STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 6666

Petition of Vermont Gas Systems, Inc. for a Certificate of Public Good authorizing the construction of a 4.26 mile, natural gas, transmission-pressure pipeline and pressure-regulation station in the Towns of Swanton and St. Albans, Vermont	Hearing at Montpelier, Vermont June 7, 2002

Order entered: 7/1/2002

PRESENT: Peter B. Meyer, Hearing Officer

APPEARANCES: Suzanne M. Monte, Esq.
Downs, Rachlin and Martin, PC
for Vermont Gas Systems, Inc.

Aaron Adler, Esq.
for Vermont Department of Public Service

Warren Coleman, Esq.
for Vermont Agency of Natural Resources

I. INTRODUCTION

This case concerns a petition filed by Vermont Gas Systems, Inc. ("Vermont Gas" or "VGS") on February 22, 2002, requesting a certificate of public good under 30 V.S.A. § 248 authorizing construction of a "natural-gas facility" (as defined by § 248) to be located in the Towns of Swanton and St. Albans, Vermont. Vermont Gas' petition specifically seeks to (1) construct a pipeline in a 4.26-mile corridor (the "Corridor") commencing at Beebe Road in Swanton and terminating immediately south of Newton Road in St. Albans ("Phase IV Looping"), and (2) construct a pressure-regulation station on Nason Road in St. Albans (the "Nason Road Station"), referenced collectively in this Proposal for Decision as the "Project."

Vermont Gas provided a copy of its complete filing to each party specified in Subdivision (a)(4) of § 248. On April 5, 2002, the Public Service Board ("Board") notified all such parties that the Board had appointed Peter B. Meyer, Environmental Analyst, as hearing officer in this

proceeding and that a prehearing conference would be held at the Board's hearing room in Montpelier on April 16, 2002.

A prehearing conference was held on April 16 to consider the schedule for and issues raised by Vermont Gas' petition. At the prehearing conference, the parties proposed a schedule for this docket and several dates for a site visit and public hearing.

As required by Subdivision 248(a)(4)(A), the Board arranged for publication of notice in the *St. Albans Messenger* on April 22 and 29, 2002, and in the *County Courier* on April 25, and May 2, 2002, notifying the public that a public hearing would be held on Vermont Gas' petition in the Community Meeting Room located on the lower level of the Swanton Public Library at 7:00 p.m. on May 13, 2002. The notice also notified the public that a site visit would be conducted on May 13, 2002, at 4:00 p.m. Following such notice, the Hearing Officer convened a site visit and public hearing on May 13. Representatives of Vermont Gas, the Vermont Department of Public Service ("Department") and ANR attended, but no other person attended the site visit or the public hearing. In addition, no person requested intervention by the April 26 deadline.

Following formal and informal discovery on Vermont Gas' petition, the parties negotiated a settlement and filed a Stipulation with the Board on May 16, 2002. *See* Stipulation Among Vermont Gas Systems, Inc., the Vermont Department of Public Service, and the Vermont Agency of Natural Resources, dated May 16, 2002 (the "Stipulation"). Exh. Joint 1.

On May 23, 2002, the Board provided notice to all parties that a technical hearing would be held at the Board's hearing room in Montpelier at 9:30 a.m. on June 7, 2002. The technical hearing was held as scheduled on June 7, 2002.

This matter is ready for decision, and I hereby propose that the Board make the following findings and issue a conditioned certificate of public good to Vermont Gas for the Project.

II. FINDINGS

Based upon the substantial evidence of record and the testimony presented at the hearing, I hereby report the following findings to the Board, in accordance with 30 V.S.A. § 8.

A. The Project

1. Vermont Gas is a company that transmits, distributes and sells natural gas to the public in Vermont. Pet. at 1.

2. The Project for which Vermont Gas seeks approval consists of: (a) construction of 4.26 miles of 16-inch pipeline located in Swanton and St. Albans, Vermont, commencing at Beebe Road in Swanton and terminating immediately south of Newton Road in St. Albans; and (b) construction of a pressure-regulation station on Nason Road in St. Albans. *Id.*; Flock pf. at 3.

3. This Project is the fourth phase of a multi-year process of reinforcing or "looping" VGS' transmission-pressure network ("System Expansion"). Flock pf. at 4.

4. Phases one through three of the System Expansion resulted in a looping of the system from the U.S./Canada border to Beebe Road in Swanton, approximately 9.1 miles. *Id.*

5. The proposed Phase IV Looping begins at the current southern terminus of the built-out portions of the System Expansion and follows the New England Central Railroad and the existing 10-inch-diameter pipeline, traveling within existing and new rights-of-way on private property except for one New England Central Railroad crossing, four road crossings in the Town of Swanton, one road crossing in the Town of St. Albans, and a Vermont state highway crossing. The estimated cost of the pipeline is $3.6 million. *Id.* at 4, 45.

6. The proposed Nason Road Station will provide needed reinforcement to the St. Albans distribution system and is strategically located as a convenient southern terminus for future System Expansion projects. This station is estimated to cost approximately $600,000. *Id.* at 4-5, 27-28, 45.

7. Even if additional phases of the System Expansion are not constructed, the St. Albans system will need reinforcement. Therefore, the Nason Road Station construction is scheduled in two parts: the reinforcement component will be constructed with Phase IV Looping; and the remaining components will be deferred until Phase V is needed. VGS is not seeking Board approval or "pre-approval" of Phase V at this time. *Id.* at 5.

8. Without the Nason Road Station, VGS models show that the peak winter day pressure of the St. Albans system could drop to 20 to 22 psig at its end points, which may result in loss of

service to some customers. Reinforcement of the St. Albans system will eliminate this problem. *Id.* at 7.

9. The Nason Road site was selected because (a) it is an ideal site for a distribution station because there are existing larger-diameter pipelines on Nason Road, the St. Albans Industrial Park is very close to the site, and the existing VGS transmission corridor is adjacent to the site; (b) the site provides a convenient and reasonable distance for a transmission system internal-inspection (pigging) station; and (c) VGS can better utilize linepack volumes within the 16-inch-diameter pipeline and increase usable pipeline capacity when Phase V is constructed. *Id.* at 7-8.

B. Alternatives to the Project

10. In its Integrated Resource Plan ("IRP"), filed November 1, 2001, VGS explored various growth scenarios (with and without demand-side management or "DSM"), the results of which showed that the Phase IV Looping was required in 2003 for each scenario. Flock pf. at 43.

11. The IRP also explored the expansion of VGS' propane-air plant and LNG as alternative sources of supply; however, the supply-optimization model used by VGS did not select either source as a preferred supply option. *Id.* at 44.

12. In Phase I (Docket No. 5772), VGS and the Board evaluated and rejected several other alternatives to avoid expanding at the north end of VGS' transmission system, including (a) an alternative pipeline-delivery point closer to Burlington than VGS' existing and sole delivery point with Trans Canada Pipeline ("TCPL") (rejected because no such alternate pipelines and delivery points exist); and (b) storage or natural-gas-production well in the Burlington area (rejected because there are no storage facilities or natural-gas supplies in production or planned in Vermont, and the time required for and the uncertainties associated with permitting storage or new supplies would be substantial); these conclusions remain the same today. *Id.* (citing Docket No. 5772, Order of 6/12/95 at Findings 7 through 10).

13. VGS also evaluated whether a 16-inch pipe is least-cost compared to a 12-inch or 10-inch pipe (that provides similar capacity), and concluded that a 16-inch pipeline, which would be shorter than either of the alternatives, is the most cost-effective alternative. *Id.* at 44-45.

14. A larger diameter pipeline would not achieve additional capacity and was not considered because of the existing 16-inch configuration. *Id.*

C. Corridor Selection

15. Approximately 74% of the Phase IV route is within or adjacent to existing pipeline right-of-way, which is cost-effective and uses an existing corridor. The remaining 26% of the Project will be constructed within new easements and rights-of-way. *Id.* at 16.

16. Approximately 5,800 feet of the Project utilizes new easements because the existing easement is within a New England Central Railroad right-of-way, which is not exclusive and does not allow for additional pipelines. For this 5,800-foot portion, VGS considered alternative routes adjacent to and east or west of the railroad and selected a route adjacent to the railroad on the east side because construction costs would be lower due to easier access, one railroad crossing on the east side instead of two crossings on the west side, less wooded land to clear, less rock to excavate, and avoidance of a significant wetland and a pond on the west side. *Id.*

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

17. The Project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. This finding is supported by findings 18 through 26, below.

18. Vermont Gas approached the following planning and municipal legislative organizations regarding the Project: Swanton Planning Commission (via the Town Administrator); Swanton Selectboard; Town of St. Albans Development Review Board; Town of St. Albans Selectboard; and the Northwest Regional Planning Commission. Flock pf. at 17.

19. The Town of Swanton Plan does not specifically address pipelines and therefore no restrictions on service connections exist. Nonetheless, VGS obtained letters of support from the Swanton Selectboard and the Swanton Planning Commission (via the Swanton Town Administrator), with the agreed-upon understanding that VGS will be responsible for repairing

any pavement slumping that may occur as a result of the pipeline installation. *Id.*; exhs. VGS-3, VGS-4, and VGS-31.

20. The Town of St. Albans Zoning Bylaws contain a provision relating to underground utilities, including natural-gas pipelines. Flock pf. at 18.

21. Even though Board approval under § 248 would preempt local land-use by-laws, VGS applied for and received Site Plan Review and Conditional Use approvals from the Town of St. Albans Development Review Board, which do not place any restriction on service connections. VGS agrees to abide by the conditions specified in the approvals. *Id.*; exh.VGS-7.

22. The Northwest Regional Planning Commission ("NRPC") provided letters of support indicating that the Project is not in conflict with the Northwest Regional Plan in effect and that it is a benefit to customers to have additional energy alternatives available. Flock pf. at 17-18; exhs. VGS-5 and VGS-6.

23. The NRPC identified landscaping issues at Nason Road, which VGS resolved in its authorization from the Town of St. Albans. *Id.*

24. The Project is underground and located adjacent to an existing railroad right-of-way or within an existing pipeline right-of-way; therefore, its impact on the physical and visual environment is minimized, in conformance with the goals of Act 200. *Id.* at 18-19.

25. The Project will not affect any development plans for Swanton, St. Albans or the region. *Id.* at 19.

26. Vermont Gas has located the Corridor and designed the Project in a way that meets federal and state environmental and land-use requirements and § 248's requirement to mitigate and thereby avoid adverse impacts on the natural environment. Findings 54-147, below.

Need For Present and Future Demand for Service

[30 V.S.A. § 248 (b)(2)]

27. The Project is required to meet the present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and load management measures. This finding is supported by findings 28 through 42, below.

28. Vermont Gas evaluates customer demand from two different perspectives, peak-day load and peak-hour load. Flock pf. at 19.

29. For the fiscal year beginning on October 1, 2002, Vermont Gas projects a peak-day demand of 58,821 Mcf and a peak-hour demand of 5% of that amount or 2,941 Mcf, including the effect of DSM. Without incorporating the effects of DSM, peak-day and peak-hour demand would be 61,107 Mcf and 3,055 Mcf, respectively. *Id.* at 20-21.

30. DSM has saved Vermont Gas almost 287,000 Mcf through the installation of efficiency measures since the program's inception through calendar year 2000, with a peak-day impact of approximately 1,635 Mcf. *Id.* at 21.

31. VGS' most important peak-day DSM initiative is its interruptible program that has avoided over 16,600 Mcf on a peak day. *Id.*

32. Vermont Gas estimates that DSM will have reduced the peak day by 2,286 Mcf by 2003, avoiding approximately two miles of looping, and 3,468 Mcf by 2006, avoiding approximately three miles of looping. However, DSM cannot fully avoid the need for looping because the demand for natural gas is still growing as a result of new construction and the conversion of equipment from oil or propane. *Id.* at 21-22.

33. DSM also does not provide the other additional benefits from looping such as increased linepack, the ability to inspect internally VGS' 10-inch line (where looped), and increased system reliability. *Id.* at 22.

34. Vermont Gas must have sufficient supplies to serve peak-day demand and sufficient capacity on its system or "deliverability" to deliver those supplies from the border to its customers. *Id.* at 22-23.

35. VGS estimates peak-day demand for winter 2002/2003 will be 58,821 Mcfd. *Id.* at 20, 24.

36. Without Phase IV Looping, VGS' total capacity (with propane air) for the 2002/2003 winter is projected to be 57,655 Mcfd, resulting in an estimated capacity shortfall of 1,166 Mcfd. *Id.* at 24.

37. Phase IV looping will provide an additional 4,658 Mcfd (including the impact on propane-air injection) that will eliminate the projected capacity shortfall for the next three years. *Id.* at 24-25.

38. VGS selected 4.26 miles of additional pipeline to reasonably match system capacity to market demand over the next two to three years, while minimizing the rate impact associated with expanding the transmission system. *Id.* at 25.

39. Depending upon future load growth, VGS anticipates construction of Phase V in the summer of 2005. *Id.*

40. Installing less than 4.26 miles may require VGS to construct again in the summer of 2003 or could result in tying in to the existing system at a less logical location. *Id.*

41. From an operational, financial and rate perspective, it is desirable to undertake a major pipeline construction no more frequently than every other year. *Id.*

42. In the Stipulation, the Parties agreed to a condition for an assessment and action plan relative to retrofit efficiency. Stip. at 2.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

43. The Project will not have an adverse effect on system stability or reliability. This finding is supported by findings 44 through 47, below.

44. South of Beebe Road, Vermont Gas currently operates a single-line transmission system that, if damaged in any way, would seriously affect its ability to serve customers downstream of the damage. By constructing a looped or parallel pipeline, Vermont Gas will gain the ability to bypass a damaged section and repair it without curtailing customer service. Flock pf. at 26.

45. The Project also provides VGS with additional linepack with which to serve its customers in the event of a disruption of supply upstream of VGS' border station. In addition, the Project will enable VGS to take advantage of higher gas pressures that may be available from TCPL in the future to build linepack in its 16-inch pipeline, which would result in greater pipeline capacity. *Id.*

46. The design and engineering criteria utilized by Vermont Gas with this Project will ensure that the existing system stability and reliability are not adversely affected by the Project. *Id.*

47. The Nason Road Station will provide a second source of natural gas to the St. Albans distribution system, thereby enhancing system stability and reliability and will increase end-point pressures, which will allow additional customers to be added to the system. *Id.* at 27.

Economic Benefit to the State and Its Residents

[30 V.S.A. § 248(b)(4)]

48. The Project will result in an economic benefit to the State and its residents. This finding is supported by findings 49 through 52, below.

49. Construction of the Project will allow Vermont Gas to extend its service to new customers, providing them with access to a competitively-priced fuel which will strengthen the economic health of those customers and Vermont as a whole. Flock pf. at 27.

50. The availability of additional energy alternatives is a benefit to customers. *Id*. at 17, 27; exhs. VGS-5 and VGS-6 (Letters of support from Northwest Regional Planning Commission).

51. VGS' plan to construct the System Expansion in phases to meet expected demand and the location of the Project predominantly within existing rights-of-way will reduce the costs associated with construction, which in turn will minimize any short-term, upward pressure on rates. In addition, the Project represents a $4.2 million investment that will result in increased load and state property taxes. Flock pf. at 27-28.

52. Construction of a 16-inch diameter pipeline, as compared to construction of a 12-inch or 10-inch diameter pipeline (to achieve the same capacity), is the most cost-effective alternative. *Id*. at 45.

Aesthetics, Historic Sites, Air and Water Purity, the Natural Environment and Public Health and Safety

[30 V.S.A. § 248(b)(5)]

53. The Project as proposed will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety. This finding is supported by findings 54 through 147, below, which are based on the criteria specified in 10 V.S.A. §§ 1424a(d) and 6086(a)(1) through (8), 8(A) and (9)(K).

Air and Water Pollution

[10 V.S.A. § 6086(a)(1)]

54. The Project as proposed will not result in undue air or water pollution. This finding is supported by findings 55 through 74, below.

55. The project will not result in undue air pollution or an undue adverse effect on air purity. This finding is supported by findings 56 through 58, below.

56. By designing and constructing the project in accordance with the U.S. Department of Transportation's regulations, American National Standard ASME B-31.8, and Board Rule 6.100, the pipeline will be designed to prevent leaks. Flock pf. at 12-13.

57. Vermont Gas has an aggressive program to prevent leaks and assure timely repair; moreover, the pipeline will be hydrostatically pressure tested to at least 150% of the maximum operating pressure, the pipe will have an external protective coating of fusion bonded epoxy and a cathodic-protection system to prevent corrosion, and the pipeline will be clearly marked with permanent signs to prevent third party damage. *Id.* at 12-13, 37.

58. To control dust during construction, Vermont Gas will use calcium chloride or water. *Id.*

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

59. The project will meet all applicable health and environmental conservation department regulations regarding reduction of the quality of the ground or surface waters flowing through or on lands which are headwaters of watersheds characterized by steep slopes or shallow soils, drainage areas of 20 square miles or less, above 1500 feet in elevation, watersheds of public water supplies, or areas supplying significant recharge waters to acquifers. This finding is supported by findings 60 through 69, below.

60. The Phase IV Corridor crosses portions of two small tributaries to the Missisquoi River and the southernmost two miles lie in the watershed of Stevens Brook, a tributary to St. Albans Bay. Briggs pf. at 3.

61. Because the pipeline Corridor is adjacent to and parallel to an active railroad, the subject watersheds contain sections of Interstate 89, U.S. Route 7 and associated residential development, and Stevens Brook drains most of St. Albans City, the Corridor cannot be characterized as land that is not devoted to intensive development. Briggs pf. at 4.

62. There are steep slopes located along the Stevens Brook crossing, however, they are not characteristic of the watershed as a whole. *Id.* at 4-5.

63. Two small drainages at the northern end of the Corridor and the Stevens Brook have drainage basins of twenty square miles or less. *Id.* at 5.

64. The Corridor is between 150 and 293 feet in elevation, well below the 1,500 foot maximum specified in Section 6086. *Id.*

65. Contacts with the Vermont Department of Health regarding designated watersheds of public water supplies did not disclose the location of any watersheds near the Corridor. *Id.*

66. VGS is not aware of any aquifers in the area; nonetheless, once installed at a depth of 3 to 5 feet, the pipeline would not impact any aquifers. *Id.*

67. Vermont Gas will comply with its proposed comprehensive soil-erosion plan during and after construction and its Storm Water Pollution Prevention Plan filed with the ANR Department of Environmental Conservation Water Quality Division. *See* findings 94, 107, 113-14, 117 *infra*; Flock pf. at 32; exh. VGS-2 (Revised).

68. VGS has obtained stream alteration permits from the Water Quality Division of ANR for the two streams crossed by the Corridor. Exhs. VGS-13, VGS-14, and VGS-15.

69. The Water Quality Division of ANR has indicated that the Project construction plans, as amended, will prevent undue soil erosion and sediment transport if the plans are properly implemented. Exh. VGS-32 (Letter from Kim Greenwood to Warren Coleman of May 10, 2002).

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

70. The Project will meet all applicable health and environmental conservation regulations regarding the disposal of waste and will not involve the injection of waste materials or any harmful or toxic substances into groundwater or wells. This finding is supported by findings 71 through 74, below.

71. The Project is designed solely to transport natural gas and will thus not produce emissions into the air or water. Flock pf. at 36.

72. During normal operations, the Project will not use or discharge water. *Id.* at 37.

73. During and after construction, VGS will comply with its stormwater permits and Stormwater Pollution Prevention Plan to minimize pollution from construction. ANR issued a General Permit 3-9001 for Stormwater Runoff from Construction Sites on June 24, 2002, that outlines the requirements that VGS must follow to ensure that the quality of stormwater runoff is maintained. *Id.*; ANR General Permit 3-9001 for Stormwater Runoff from Construction Sites, dated June 24, 2002.

74. Water for hydrostatic testing will be discharged into upland areas at the north or south end of the Project and standard haybale ponds will be used to trap sediment when dewatering the pipeline after hydrostatic testing. Flock pf. at 38.

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

75. Project's design has considered water conservation, multiple use or recycling is not technically and economically practical for this project, and it uses the best available technology for use of water. This finding is supported by findings 76 through 78, below.

76. The Project will not use or discharge water during its normal operation. Flock pf. at 38.

77. The use of water will be limited to dust control (if necessary during construction) and hydrostatic testing. *Id.*

78. Water for dust control and hydrostatic testing will be obtained from the Village of Swanton or the City of St. Albans, both of whom have indicated that they have an adequate supply of water. *Id.*; exhs. VGS-22 and VGS-23 (Letters from Village of Swanton and City of St. Albans).

Floodways

[10 V.S.A. § 6086(a)(1)(D)]

79. The Corridor does not cross any floodplains. Briggs pf. at 6.

80. Due to the underground nature of the Project, even along the small streams that do lie within the Corridor, the pipeline will not restrict flows nor reduce the area's capacity to store stormwater or runoff. *Id.*

81. After construction, Vermont Gas will restore ground surfaces to pre-construction conditions. *Id.*

Streams and Shorelines

[10 V.S.A. §§ 6086(a)(1)(E) and 6086(a)(1)(F)]]

82. The Corridor will cross two Class "B" streams: a small unnamed brook in Swanton and the Stevens Brook in St. Albans. Briggs pf. at 6; Flock pf. at 31, 39.

83. Impacts to these streams will be minimal and of short duration, occurring only during construction. Briggs pf. at 6.

84. Vermont Gas has obtained stream alteration permits from the Water Quality Division of ANR and agrees to abide by the conditions of the permits. Flock pf. at 31, 39; exhs. VGS-13, VGS-14, and VGS-15 (Letters from Christopher Brunelle, ANR Water Quality Division).

85. VGS plans to follow erosion-control techniques that will protect water and shores from disturbance from erosion, sediment or construction debris. Briggs pf. at 6.

86. Construction will not result in permanent surficial disturbance and any disturbed areas will be promptly restored. Therefore, the stream will retain is pre-construction physical, biological and aesthetic characteristics. *Id.* at 6-7.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

87. The project will not violate the rules of the water resources board related to significant wetlands. This finding is supported by findings 88 through 91, below.

88. Vermont Gas designed the Project and timed the construction to minimize wetland concerns. Flock pf. at 15-16, 39; Briggs pf. at 7.

89. For each wetland crossed, VGS will abide by the applicable construction conditions outlined in Wetlands Fact Sheet Number 14 published by the Wetlands Office of the Water Quality Division of the Department of Environmental Conservation. Flock pf. at 39.

90. There are four Class 2 wetlands along the Corridor and another at the proposed transmission station. Briggs pf. at 7.

91. Vermont Gas has obtained and will comply with the requirements of a conditional-use determination ("CUD") for the first two Class 2 wetlands, an amendment to that CUD for the third wetland, and a second amendment for the fourth wetland on the pipeline and the wetland at the Nason Road Station. Therefore, VGS has complied with wetland rules established by the Water Resources Board. *Id.* at 7-8; Flock pf. at 30; exhs. VGS-11, VGS-12, and VGS-29 (ANR Department of Environmental Conservation Conditional Use Determination and amendments thereto).

Sufficiency of Water And Burden on Existing Water Supply

[10 V.S.A. § 6086(a)(2)&(3)]

92. The project has sufficient water available for its needs, and it will not cause an unreasonable burden on existing water supplies. This finding is supported by findings 93 through 95, below.

93. The Project will not use or discharge water during its normal operation. Flock pf. at 38.

94. The use of water will be limited to dust control (if necessary during construction) and hydrostatic testing. *Id.*

95. Water for dust control and hydrostatic testing will be obtained from the Village of Swanton or the City of St. Albans, both of whom have indicated that they have an adequate supply of water. *Id.*; exhs. VGS-22 and VGS-23 (Letters from Village of Swanton and City of St. Albans.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

96. The Project will not result in unreasonable soil erosion or reduce the ability of the land to hold water. This finding is supported by findings 97 through 102, below.

97. The only steep slopes in the Corridor are at the Stevens Brook crossing where the slopes approach 50% for a short distance; however, VGS has proposed special precautions to prevent erosion or impacts to the stability of the slope. Briggs pf. at 12.

98. VGS has proposed a comprehensive soil-erosion plan that addresses soil stability, revegetation, and other measures to prevent undue erosion on slopes and adjacent wetlands both during and after construction. *Id.*; Flock pf. at 36; *see also* exh. VGS-2 (Revised).

99. Because the pipeline will be underground, it will not affect the water-storage capacity of wetlands or interfere with the free flow of surface waters. Briggs pf. at 12.

100. In upland areas, the capacity of the land to hold water will not be adversely affected because there will be no alteration of topography and pre-existing vegetative conditions will be restored after construction. *Id.* at 12-13.

101. VGS practices and precautions will protect soil stability and the capacity of the land to hold water. *Id.* at 13.

102. The Water Quality Division of the Agency of Natural Resources has indicated that VGS' Project construction plans, as amended, will prevent undue soil erosion and sediment transport if the plans are properly implemented. Exh. VGS-32 (Letter from Kim Greenwood to Warren Coleman of May 10, 2002).

Transportation Systems

[10 V.S.A. § 6086(a)(5)]

103. The Project will not cause unreasonable congestion or unsafe conditions with respect to transportation systems. This finding is supported by findings 104 through 114, below.

104. The Corridor crosses four roads in the Town of Swanton, one road in the Town of St. Albans, a Vermont state highway and the New England Central Railroad. Flock pf. at 4.

105. Once constructed, the Project will not cause unreasonable congestion or unsafe conditions for any means of transportation. *Id.* at 39.

106. The Swanton Selectboard and the Swanton Planning Commission (through the Swanton Town Administrator) support the Project with the understanding that VGS will be responsible for repairing any pavement slumping that may occur as a result of the pipeline installation. VGS has agreed to this understanding. *Id.* at 17, 42; exhs. VGS-3, VGS-4, and VGS-31.

107. The Town of St. Albans Development Review Board approved the Project with the condition that VGS repair damage caused to any Town road. VGS has agreed to abide by the Town's conditions. Flock pf. at 18, 42; exh. VGS-7.

108. VGS will utilize a temporary access road to the construction site from Vermont Route 7. A permit is not required for this use because the access road will use an existing farm road and farm yard entrance off Route 7. Flock pf. at 39-40.

109. The Project will cross under State Highway 38 (the "Newton Road") via horizontal drilling, with access roads from Highway 38 to the construction areas. *Id.* at 40.

110. The pipeline will be installed beneath the highway by boring with a casing pipe installed deep enough under the highway to prevent endangering the highway; bore pits will be far enough from the edge of the road to prevent undermining the road. *Id.*

111. VGS will obtain a permit for this activity from the Vermont Agency of Transportation, which will be provided to the Board upon receipt. *Id.* at 40, 43.

112. The Project will also cross under the Canadian National Railway right-of-way without impacting the railroad operation of the New England Central Railroad. *Id.* at 40.

113. This crossing will be constructed by boring beneath the railway with a casing pipe deep enough to prevent endangering the rail bed; bore pits will be a sufficient distance from the tracks to prevent endangering the rail bed. *Id.*

114. VGS has obtained a license to cross the Canadian National Railway right-of-way. *Id.* at 42; License for Underground Facility Pursuant to Mutual Agreement, dated June 3, 2002.

Discussion

As indicated in findings 111 and 114, above, VGS has not yet obtained approvals from the Agency of Transportation for the Vermont Route 38 crossing or from the New England Central Railroad for the railroad crossing. While such approvals would be definitive evidence that VGS's construction activities in these areas would not adversely affect these transportation resources, these is sufficient other evidence in the record for me to recommend positive findings to the Board under this criterion. Nevertheless, I recommend that the Board include a condition in its certificate of public good that would prohibit construction in these two areas until these approvals have been obtained and provided to the Board.

Educational and Municipal Services

[10 V.S.A. § 6086(a)(6) & (7)]

115. The proposed project will not place an unreasonable burden on the ability of any involved municipalities to provide educational or municipal services. This finding is supported by findings 116 through 118, below.

116. The Project will not require the placement or relocation of any Vermont Gas employees to Swanton or other nearby communities, or otherwise require educational services. Flock pf. at 41.

117. The Project will not require any municipal or governmental services. *Id.*

118. While VGS does not anticipate removal of excess soil materials, any excess undesirable soils will be transported to a State-approved landfill or disposal area. *Id.*

Aesthetics, Historic Sites or Rare and Irreplaceable Natural Areas

[10 V.S.A. § 6086(a)(8)]

119. The proposed project will not have an undue adverse effect on the scenic or natural beauty of the area, or upon aesthetics, historic sites or rare and irreplaceable natural areas. This finding is supported by findings 120 through 130, below.

120. For the most part, the Corridor passes through open terrain or along existing rights-of-way, follows the contour of the land, and will be visible from Beebe Road at the northern end and from Comstock, Kellogg, Jewett and Newton Roads at the southern end. Briggs pf. at 13.

121. At Beebe Road, the pipeline will be installed in an existing corridor next to the railroad. *Id.*

122. From Station 18 + 80 to Newton Road, the pipeline will travel primarily through open areas–either agricultural fields or old pastures–which will be changed little in appearance once the construction is completed. *Id.*

123. Use of existing corridors will minimize cutting in existing woodland. *Id.*

124. From Comstock Road to Newton Road, the Corridor will pass across fields and landscaped areas parallel to the existing pipeline and the railroad. South of Jewett Road, the pipeline will be in an existing corridor through fields and small wood lots. The appearance of these areas will not be affected except during construction. *Id.* at 13-14.

125. Aside from the required precautionary markings to indicate location, including signs and vent markers at road crossings, interconnect and valve stations, there will be no above-ground structures associated with the pipeline. *Id.* at 14.

126. VGS plans to construct a fenced pad and three small buildings at the Nason Road Station, which will be obscured by two 8-foot-high rows of cedar trees. The St. Albans Development Review Board and Planning Commission have approved the station and landscaping. *Id; see also* exh. VGS-7.

127. Because the Project will be located primarily underground and because of the characteristics of the Corridor as selected by VGS, the Project will not have an undue adverse effect on the aesthetics or scenic or natural beauty of the area. Briggs pf. at 14.

128. The impact of the Project is in context with the region, which is an area of open land, scrub and wet woods occasionally broken by roads or utility rights-of-way. As such, the impact will not be adverse. *Id.*

129. The Corridor does not include any rare or irreplaceable natural areas. *Id.*

130. In letters to Vermont Gas, the Division of Historic Preservation indicated that the Project will not have an adverse effect on any historic or archeological resources that are listed on or that may be eligible for inclusion in the State or National Registers of Historic Places, as long as VGS follows certain guidelines. VGS agrees to the conditions in the letters. Flock pf. at 33-34; exhs. VGS-19 and VGS-28 (Letters from Emily Wadhams, Agency of Commerce and Community Development, Division For Historic Preservation).

Necessary Wildlife Habitat and Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

131. The project will not have an impact on any necessary wildlife habitat or endangered species. This finding is supported by findings 132 through 135, below.

132. The Vermont Department of Fish & Wildlife has indicated that the Project will not impact any significant wildlife habitat. Flock pf. at 28-29; exhs. VGS-8 and VGS-9 (Letters from John Austin, Vermont Department of Fish & Wildlife).

133. According to the Vermont Department of Fish and Wildlife's Significant Habitat Maps for the Towns of Swanton and St. Albans, the Project area does not contain any critical habitat, significant natural communities or endangered species. Briggs pf. at 15-16.

134. In fieldwork, on the state level, Vermont Gas found no occurrences of significant natural communities or rare, threatened or endangered animals or plants, and on the federal level, found no federally-listed or proposed threatened or endangered species in the Project area. Flock pf. at 29-30; Briggs pf. at 16; exhs. VGS-10 and VGS-27 (Letters from Everett Marshall, Vermont Department of Fish and Wildlife, Nongame and Natural Heritage Program) and exh. VGS-EB-2 (Letter from U.S. Department of the Interior Fish and Wildlife Service).

135. VGS is not aware of any such resources or habitats likely to support such resources. Briggs pf. at 16.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

136. The project will not unnecessarily or unreasonably endanger the public or quasi-public investments in any governmental public utility facilities, services, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment

of or access to, such facilities, services, or lands. This finding is supported by findings 137 through 138, below.

137. The Project will run adjacent to or across certain railways and public roads but once construction is complete, the Project will not interfere with the use or maintenance of these railways and roads. Flock pf. at 42.

138. The Project will not affect any other governmental or public-utility facilities, services or lands, including State parks, municipal waste sites, and public lands and rivers because of its location and its placement underground. *Id.*

Discussion

To ensure that the construction of the Vermont Route 38 and New England Central Railway crossings will not adversely affect these facilities, the Board should, by condition of the CPG, prohibit construction of these crossings until approvals have been issued and filed with the Board.

Outstanding Water Resources

[30 V.S.A. § 248(B)(8)]

139. The Project will not adversely affect the criteria used by the State of Vermont to designate outstanding resource waters and will not constitute a facility affecting or located on any segment of water that the Vermont Water Resources Board has designated as an outstanding resource. This finding is supported by findings 140 through 147, below.

140. The Water Resources Board has designated three outstanding resource waters, none of which are located on or near the proposed Corridor. Briggs pf. at 16; Flock pf. at 43.

141. Having regard to certain criteria established by the State for designating outstanding resource waters–specifically those addressing aquifer-protection areas, value in providing temporary storage for floodwater and storm runoff, fish habitat, maintenance of habitat for threatened or endangered plants or animals, maintenance of habitat for wildlife (including stopover habitat for migratory birds), presence of scenic areas and sites, rare and irreplaceable natural areas, known archeological sites and historic resources–I have previously found that the Project will not adversely alter the values protected by such criteria. Findings 59-69, 79-91 and 129-135, *supra*; *see* 10 V.S.A. § 1424a(d) (1998).

142. The current water quality classification for streams crossed by the Corridor is Class B, which is consistent with actual water examined during VGS' field work; since the pipeline

will be underground, there will be minimum short-term impact on the water quality and no long-term impact. Briggs pf. at 18.

143. There are no gorges, rapids or waterfalls in the Corridor's vicinity. *Id*.

144. Because the pipeline will be buried, the accessibility of waters for recreational, educational, research or other public uses will not be affected. *Id*. at 19.

145. Vermont Gas is not aware of any studies prepared or under consideration regarding any of the waters crossed by the Corridor by any local, regional, State, federal or international agency. *Id*.

146. The Project will not affect any existing alteration, diversion or impoundment of which Vermont Gas is aware of any waters crossed by the Corridor. *Id*.

147. The Water Resources Board informed Vermont Gas that, while other Vermont waters have been proposed to be designated as outstanding resources, none are located near Vermont Gas' proposed Corridor, nor are there any proposed outstanding resource waters in Franklin County. *Id*.

Consistency With Company's Least Cost Integrated Plan

[30 V.S.A. § 248(b)(6)]

148. The Board has not yet approved Vermont Gas' IRP; however, the Project is consistent with least-cost planning principles. This finding is supported by findings 149 through 155, below.

149. VGS filed its IRP with the Board on November 1, 2001. Flock pf. at 43.

150. The IRP examined various growth scenarios, with and without DSM, reaching the same conclusion in each case – that Phase IV Looping is required for 2003. *Id*.

151. The IRP also explored the options of expansion of the propane-air plant and LNG as alternative sources of supply, neither of which was selected by the supply-optimization model as a preferred supply option. *Id*. at 44.

152. As evaluated and rejected by VGS and the Board in Docket No. 5772 (Phase I of the System Expansion), to avoid expanding VGS' transmission system at the north end of the system, an alternative pipeline-delivery point would have to be set up closer to Burlington than VGS' existing and sole delivery point with TCPL, and storage or natural-gas-production wells would have to be located in Burlington. However, there were and still are no such alternate pipelines and delivery points or storage facilities or natural-gas supplies in production or planned in

Vermont, and the time required for and the uncertainties associated with permitting storage or new supplies in the Burlington area would be substantial. *Id*. (citing Docket No. 5772, Order of 6/12/95 at Findings 7 through 10).

153. A larger-diameter pipeline than the proposed 16-inch diameter pipeline would not achieve additional capacity and was not considered because the existing configuration is 16 inches in diameter. *Id*. at 44-45.

154. Construction of a 16-inch diameter pipeline is more cost-effective than a 12-inch or 10-inch diameter pipeline that provides similar capacity. *Id*. at 45.

155. In the Stipulation, the Parties agreed to a condition for an assessment and action plan relative to retrofit efficiency to insure that these DSM measures acquire all cost-effective conservation resources. Stip. at 2.

Other 30 V.S.A. § 248 Criteria

156. The Project is not a natural-gas facility that is part of or incidental to an electric generating facility, so the seventh criterion of Subsection 248(b), requiring compliance with the Department's electric-energy plan, and the tenth criterion, addressing use of existing and planned transmission facilities, are not applicable. *See* 30 V.S.A. § 248(b)(7), (10) (2000).

157. The Project is not a waste-to-energy facility; therefore, the ninth criterion of Subsection 248(b) is not applicable. *Id.* § 248(b)(9).

Public Health and Safety

158. The Project facilities will be designed and constructed in accordance with the U.S. Department of Transportation Code, the American National Standard ASME B-31.8, and Board Rule 6.100. Flock pf. at 12-13.

Other Environmental and Land-Use Considerations

159. The Project is consistent with Executive Order No. 52-80 related to primary agricultural soils. This finding is supported by findings 160 through 166, below.

160. Vermont Gas has routed the Corridor where possible within or adjacent to its existing pipeline right-of-way. Flock pf. at 1, 16.

161. The Project will not significantly interfere with or jeopardize the continuation of agriculture on productive agricultural lands. *Id.* at 35.

162. The pipeline will be buried at least 4 feet deep in areas that are actively farmed to minimize the impact of farming on the pipeline. *Id.*

163. Construction of the pipeline underground will also prevent interference with future agricultural uses of the land; cattle and farm equipment will be able to cross and farmers will be able to cut forage crops on the right-of-way. *Id*.

164. Topsoil in agricultural land will be stripped from the right-of-way prior to construction and re-spread after construction to minimize topsoil compaction and mixing of topsoil with subsoils, ensuring continued productivity of the land. *Id*.

165. The Vermont Department of Agriculture, Food & Markets reviewed the Project and had no adverse comments. Flock pf. at 33, 35; Exhs. VGS-18, VGS-25, and VGS-26 (Correspondence with the Vermont Department of Agriculture, Food & Markets).

166. Construction is planned for late summer to early fall to avoid disrupting bird nesting and brood rearing, and to minimize impacts on the stream crossing because water flow will be at its lowest during that period. Finally, construction should be completed before ground freezing or heavy snowfall. Flock pf. at 46; Briggs pf. at 10.

Other Approvals

167. Vermont Gas has received a U.S. Army Corps of Engineers permit for the pipeline (amended to include the full 4.26 miles of pipeline proposed) and is awaiting a separate amendment for the Nason Road Station. This approval will be provided to the Board on receipt by VGS. *See* exhs. VGS-24 and VGS-30.

III. CONCLUSION

Based upon all the above evidence, the proposed project:

(a) will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of the municipals' legislative bodies and the land-conservation measures contained in the Town of Swanton and Town of St. Albans, Vermont;

(b) is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy-conservation programs and measures and energy-efficiency and load-management measures;

(c) will not adversely affect system stability and reliability;

(d) will result in an economic benefit to the state and its residents;

(e) will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and § 6086(a)(1)-(8), (9)(K);

(f) is consistent with the principles for resource selection expressed in VGS' least-cost integrated resource plan, and there is good cause for the project; and

(g) does not involve a facility affecting or located on any segment of the waters of the state that has been designated as outstanding resource waters by the Water Resources Board.

The foregoing findings and conclusions are hereby reported to the Board in accordance with the provisions of 30 V.S.A. § 8.

The parties have waived their rights, under 3 V.S.A. § 811, to file exceptions and present briefs and oral arguments.

Dated at Montpelier, Vermont, this 27th day of June, 2002.

s/Peter B. Meyer
Peter B. Meyer, Hearing Officer

IV. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the State of Vermont Public Service Board that:

1. The findings of fact and the conclusions of the Hearing Officer are adopted.

2. The Stipulation among Vermont Gas Systems, Inc., the Vermont Department of Public Service, and the Vermont Agency of Natural Resources is approved.

3. The Certificate of Public Good shall be subject to the following conditions:

   A. Construction, operation and maintenance of the Project shall be in accordance with the plans and evidence submitted in this proceeding.

   B. With respect to its existing Residential Retrofit and Commercial & Industrial Retrofit programs, VGS agrees to comprehensively assess at least the following additional actions to increase its acquisition of retrofit DSM resources from its existing residential, commercial, and industrial customers, and from customers who are converting to natural gas from an alternate fuel source:

      (1) further improve the program infrastructure;

      (2) increase or otherwise improve incentive structures and amounts;

      (3) enhance installation oversight assistance for major projects, including consideration of commissioning for commercial/industrial projects; and

      (4) any other steps that have been identified by VGS, its contractors, or its customers to improve its retrofit DSM resource acquisition results.

   C. VGS will report to the Department and the Board the results of such assessment and the resulting proposed action plan on or before November 1, 2002.

   D. VGS shall obtain and comply with all conditions and requirements of all necessary permits and approvals.

   E. Construction of the Vermont Route 38 (Newton Road) crossing and the New England Central Railroad crossing shall not commence until approvals have been received from the Vermont Agency of Transportation and the New England Central Railroad, and such approvals have been forwarded to the Board.

4. The construction by Vermont Gas Systems, Inc., of Phase IV of its looped pipeline, in accordance with the evidence, plans and approvals submitted in the proceeding will promote the

general good of the State of Vermont consistent with 30 V.S.A. § 248, and a Certificate of Public Good shall be issued to allow such construction.

DATED at Montpelier, Vermont, this 1st day of July, 2002.

s/Michael H. Dworkin)	
)	PUBLIC SERVICE
)	
s/David C. Coen)	BOARD
)	
)	OF VERMONT
s/John D. Burke)	

OFFICE OF THE CLERK

Filed: July 1, 2002

Attest: s/Susan M. Hudson

Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone or in writing) of any apparent errors, in order that any necessary corrections may be made.

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.